



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,543	05/25/2001	David E. Patterson	3017-56	6399

7590 03/07/2005

LAURENCE A. WEINBERGER  
SUITE 103  
882 S. MATLACK ST.  
P.O. BOX 1663  
WEST CHESTER, PA 19380-0053

EXAMINER

ZEMAN, MARY K

ART UNIT PAPER NUMBER

1631

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/866,543

Applicant(s)

PATTERSON ET AL.

Examiner

Mary K. Zeman

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/07/04 has been entered.

Claims 1-3 and 10-13 are pending in the application. Claims 4-9 have been canceled.

Applicant's arguments and amendments filed 12/07/04 have been fully considered but they are not persuasive.

### ***Rejections maintained***

Claims 1-3 and 10-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Applicant has amended the claims to move a phrase from the preamble to the end of the claim. This phrase states "wherein the virtual library can be searched for product molecules having desired properties without the necessity of generating the product structures during the search." This phrase is not sufficient to produce a concrete, tangible useful result, and does not render the product itself, the virtual library, statutory subject matter. This describes the virtual library, and proposes an intended use for the library. Statements of intended use do not materially affect the nature of the product. MPEP 2111.02. This particular intended use does not appear to structurally limit the data or provide an interrelationship to a media such that the data executes any function. The claims are drawn to products, not methods, and the product is not even saved on any computer-related media such as a disk, hard drive, or storage media. As such it is data in space which is further non-statutory.

The Examiners arguments and citations from previous Office Actions are incorporated and remain in force herein.

Claims 1-3 remain rejected and new claims 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Agrafiotis et al. (5,463,564)

Claims 1-3 and 10-12 are drawn to data representations. Claim 13 is drawn to a computer system. The computer system of claim 13 is a conventional computer system comprising a general purpose programmable computer, which comprises a CPU, Memory, means for storing and accessing data, and a "virtual library". The point of asserted novelty appears to be the stored "virtual library" and not the other element of the system. Various limitations of this "virtual library" include intended uses of the data ("which can be searched...") and methods of creating the data ("generated by the following processes...") Neither of these sets of limitations appear to structurally affect the nature of the product, the computer system. The stored data is not affected by any intended uses, nor does it appear to be structurally affected by the creation process. MPEP 2106 describes the difference between functional and non-functional descriptive material: "Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data." The virtual library of the claims does not perform any function, but is merely a storage of information. The MPEP further notes: "Where certain types of descriptive material, such as music, literature, art, photographs and mere arrangements or compilations of facts or data, are merely stored so as to be read or outputted by a computer without creating any functional interrelationship, either as part of the stored data or as part of the computing processes performed by the computer, then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer. Such "descriptive material" is not a process, machine, manufacture or composition of matter. (Data consists of facts, which become information when they are seen in context and convey meaning to people. Computers process data without any understanding of what that data represents. Computer Dictionary 210 (Microsoft Press, 2d ed. 1994).)" and further notes: "For example, a computer that recognizes a particular grouping of musical notes read from memory and upon recognizing that particular sequence, causes another defined series

Art Unit: 1631

of notes to be played, defines a functional interrelationship among that data and the computing processes performed when utilizing that data, and as such is statutory because it implements a statutory process.”

Applicant argues that Agrafiotis does not disclose the same types of data resulting from the same types of computations as those being claimed. Applicant argues that the methods of Agrafiotis are completely different, and therefor, the resulting libraries cannot be the same. This is not persuasive, as these are product-by-process claims to non-functional descriptive material. Applicant has the burden to demonstrate that the process steps recited in the claim produce material differences in the product being claimed. The MPEP discusses product-by -process claims in chapter 2100: Even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by -process claim is the same as, or obvious from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process”. See MPEP 2113.

---

It is the examiner’s position that the resulting product, the virtual library itself, which comprises chemical structures, or parts thereof, or descriptions thereof is the same. The product is a collection of data, indistinguishable from any other collection of data when looked at as a composition of matter or computer disk. (it is noted for the record that only claim 13 actually requires that the data be stored on a computer system, disk, or hard drive.) The virtual library of Agrafiotis, comprises chemical structures, or parts thereof, identified as “directed diversity chemical libraries.”

Claim 13 is drawn to a conventional computer system comprising a virtual library. Agrafiotis discloses programmed computers which store the virtual library disclosed. As discussed above, the nonfunctional descriptive material of the library is the same as that being claimed, and the conventional computer system is the same.

Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Horlbeck (USP 5,880,972).

Horlbeck (USP 5,880,972) discloses a computer system which comprises a virtual library of descriptions of chemical molecules which could be made by combinatorial synthesis. For example, at column 12, lines 34-45, Horlbeck states that the invention provides "a small molecule combinatorial library planning tool for automatically and intelligently selecting synthons without performing a chemical synthesis..." The computer system comprises a programmed computer, memory, software for selecting, and a database of synthons. As such, this anticipates the claimed system.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references are cumulative to Horlbeck, and also provide computer systems which comprise virtual libraries:

Chen et al. 5,806,062

Griffey et al. USP 6,253,168.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (571) 272 0723

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, PhD can be reached on (571) 272 0718. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of

Art Unit: 1631

the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

  
MARY K. ZEMAN  
PRIMARY EXAMINER  
*02/16/05*  
*3/2/05*

---